

100P Automatic Gas Proving System



I am the installation instructions for a gas *safety system*, please read me before you have a go.
The product I support is virtually indestructible but I have no doubt someone will try!!

Intelligas takes every care in ensuring these products reach you in perfect working order.
Each system is tested on dispatch and site induced damage *is* easily detectable.

Ensure the operation of this unit is explained fully to the kitchen staff.

For reference the infrastructure for the system you have is type - INT110a

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Siting the panel

Firstly choose a suitable mounting position for the control unit, mount the unit away from sources of extreme heat, ensure the panel is placed in a position where mechanical damage is unlikely and where it can be easily accessed for use and maintenance.

Fix the panel using the marked enclosure holes only, take care not to damage the internal wiring or PCB of the unit when drilling.

Field wiring

All wiring from the supply and to the gas valve carries mains voltage (230v ac nominal). The current edition of the IEE Wiring Regulations should be strictly adhered to, wiring and connections should be made by a suitably qualified electrician or competent person.

Field wiring voltage is reduced, do not connect mains to the aps, e-stop or fire alarm terminals

Intelligas recommends the use of FP200 or similar type of wiring for the fixed wiring installation.

Please follow the first fix wiring schedule set out below:

- 1) Gas valve 2 core + E 1.5mm
- 2) Emergency stops 2 core + E 1.5mm
- 3) Pressure switches 2 core + E 1.5mm
- 4) Fire alarm interlock (if req) 2 core + E 1.5mm
- 5) Main supply 2 core + E 1.5mm

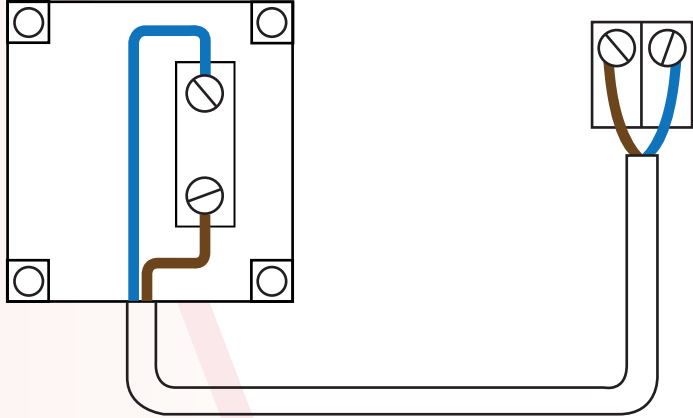
The mains supply should be 230v 1 phase, fed via a fused DP connection switch fused at 5 amp max.

UNDER NO CIRCUMSTANCES SHOULD TERMINATIONS BE MADE OR DISCONNECTED WHILE POWER IS APPLIED TO THE UNIT.

Connections

E stop connections

For emergency stop switches use PCB terminals marked Estop



Fire alarm interface (if used)



If fire alarm interface is not to be used then link as shown.

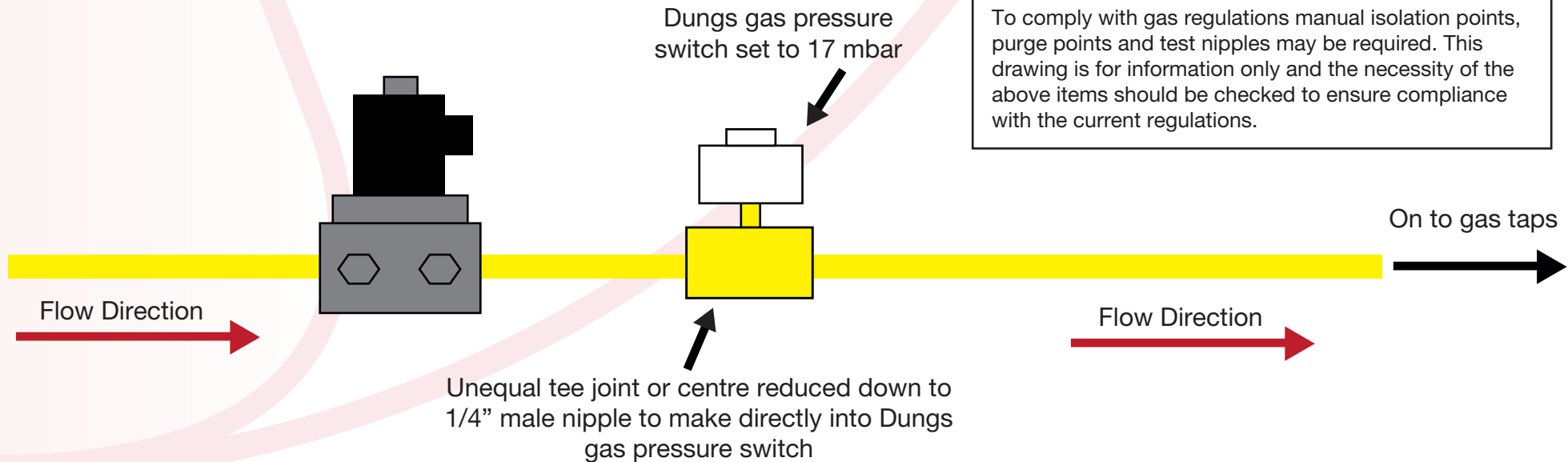
Gas pressure switch connections

Note :- As this pcb also serves other products the terminals are marked as EXT FAN but must be connected to the gas pressure switch don't forget to **REMOVE THE LINK!**

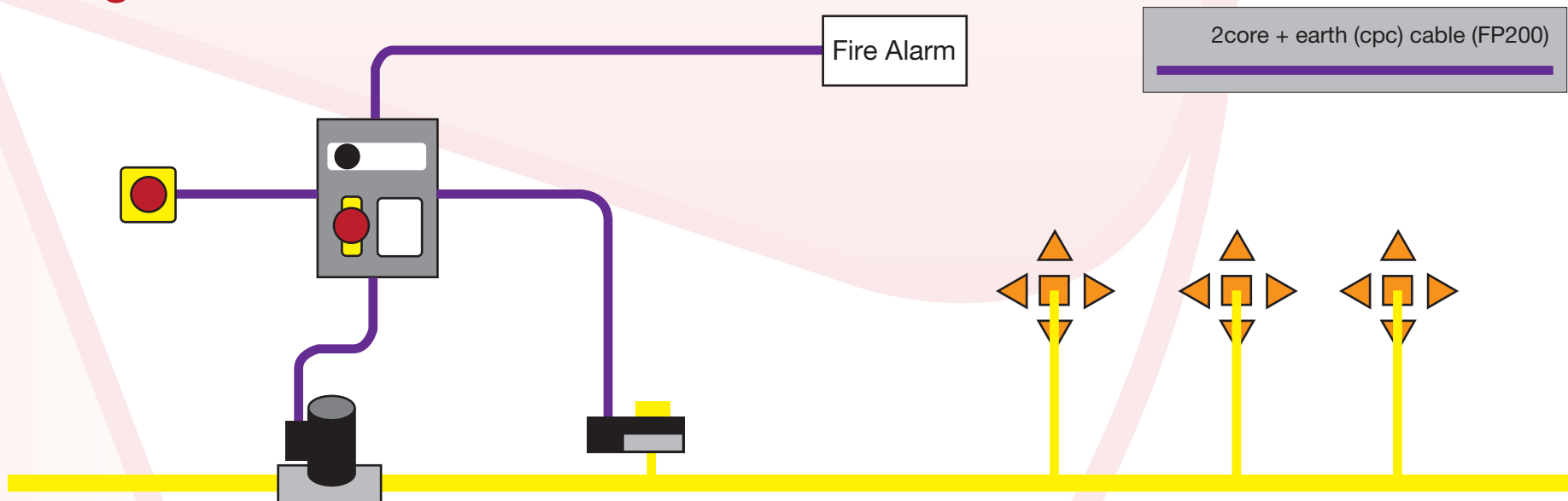


Dungs gas pressure switch connector
Use terminals 2 & 3

Intelligas gas proving system mechanical layout (lab)



Intelligas 100P installation schematic



Wiring, commissioning & fault finding

Double check all terminations have been made and checked for tightness, check all peripheral equipment such as emergency stops, pressure switches and gas valve are connected and the covers are in place.

Now the Dungs pressure switch needs to be set up, assuming the gas pipe and meter are correctly sized the standing pressure should be 21mbar (natural gas) or 37mbar (LPG). The pressure switch should be set to no more than 3mbar under the standing pressure or 1mbar under the measured pressure when the cook line is fully "on load".

Now the gas pressure switch has been commissioned and the covers replaced the system can be fully tested.

Apply the power & reset all emergency stops, the top LED should be green and the bottom LED red.

Turn the key switch and press the stop/reset button, release the key switch. The bottom led will turn green "gas valve open" and the centre LED will go amber "testing".

After 5 seconds the bottom LED will go red and the gas valve will be closed for the proving time of 45 seconds.

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Wiring, commissioning & fault finding (continued)

If the system is sound after the proving time has elapsed, the bottom LED will go green indicating “gas valve open”. The centre LED will also go green indicating “test passed”.

If the test fails i.e. a leak is detected then the bottom LED will go red showing “gas valve closed”. The centre LED will go red indicating “prove failed / gas pressure low”.

If at any point after a successful prove the gas pressure drops below the gas pressure switch set point. The system will display the bottom LED as red showing “gas valve closed”. The centre LED will also go red indicating “prove failed / gas pressure low”.

Note :- All faults are displayed until the reset / start button is pressed, so if after the panel is powered up a fault is displayed then ensure the reset / start button is pressed to reset the fault. If the fault remains then the unit should be powered down and the wiring checked.

THE KEY IS TO BE HANDED TO THE GAS MANAGER / RESPONSIBLE PERSON ONSITE. IT IS THE RESPONSIBILITY OF THE MANAGEMENT ONSITE TO ENSURE THE SAFETY OF THE GAS SYSTEM. THEREFORE IT IS THEIR DUTY TO ARM AND RESET THE PROVING SYSTEM.

Fault Finding

System does not detect a forced / test leak.

- 1) Ensure the gas pressure switch is down stream of the gas valve
- 2) Check switch operation (closed on pressure, open on no pressure across term 2 & 3)
- 3) Contact technical

No power to gas valve

- 1) Check PCB fuse
- 2) Contact technical

System constantly displays emergency stop

- 1) Check all connections to emergency stops are correct and emergency stops are a closed circuit / loop.
- 2) Contact technical

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